



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/643,912	08/23/2000	Kiyoshi Asami	001062	9494
38834	7590	10/18/2004	EXAMINER	
WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP 1250 CONNECTICUT AVENUE, NW SUITE 700 WASHINGTON, DC 20036			NGUYEN, TU MINH	
			ART UNIT	PAPER NUMBER
			3748	

DATE MAILED: 10/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/643,912	Applicant(s) ASAMI ET AL.	
	Examiner Tu M. Nguyen	Art Unit 3748	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 September 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5 and 8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 5 and 8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 August 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. An Applicant's Amendment filed on September 15, 2004 has been entered. Claims 6-7 have been canceled, and claim 5 has been amended. Overall, claims 5 and 8 are pending in this application.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office Action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office Action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 3748

4. Claims 5 and 8 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Kojima (U.S. Patent 6,253,866).

Re claim 5, as illustrated in Figures 1-2, Kojima discloses a catalyst warming control apparatus for a hybrid vehicle asserting control over the vehicle both when the vehicle is moving and when the vehicle is standing still, having an internal combustion engine (1), a generator (3) for generating electric power from an output of the internal combustion engine, a power storage unit (6) for storing electric power generated by the generator, and an electric motor (2) driven by the electric power stored in the power storage unit, the hybrid vehicle being driven by at least one of the internal combustion engine and the motor, the catalyst warming control apparatus comprising:

- a power distributing mechanism (4) for distributing a rotary force to the generator (3) and a rotary shaft (2a) of the electric motor (2);

- a coolant temperature detector (17) for detecting an engine temperature of the internal combustion engine (1);

- a temperature detector (15) for detecting the temperature of a catalyst;

- a first comparison circuit (step S202) for comparing the detected engine temperature with a preset first reference value;

- a control circuit (23, 24) for allowing the generator to generate electric power and to store the power in the power storage unit when the internal combustion engine is driven, and when the detected engine temperature is below the first reference value (step S202 with YES answer, step S204 with NO answer, step S205, step S206 with YES answer, and step S207; also

Art Unit: 3748

see at least line 57 of column 8 to line 50 of column 9 and line 61 of column 10 to line 32 of column 11);

- a remaining charge detector (16) for detecting a remaining charge of the power storage unit; and

- a second comparison circuit (lines 42-51 of column 7) for comparing the detected result from the remaining charge detector with a preset second reference value relating to the remaining charge,

wherein the control circuit drives the vehicle by the output from the internal combustion engine, engages the power distributing mechanism, and allows the generator to generate electric power and to store the power in the power storage unit, when the detected result from the temperature detector is below the first reference value according to the output from the first comparison circuit, and when the detected result from the remaining charge detector is equal to or below the second reference value relating to the remaining charge according to the output from the second comparison circuit (see lines 1-25 of column 9); and

wherein the control circuit allows the generator to generate electric power, disengages the power distributing mechanism, and drives the vehicle by the generated electric power and stores the electric power, when the detected result from the temperature detector is below the first reference value according to the output from the first comparison circuit, and when the detected result from the remaining charge detector is above the second reference value relating to the remaining charge according to the output from the second comparison circuit (see lines 1-33 of column 9).

As indicated on line 62 of column 5 to line 6 of column 6, the power distributing mechanism (4) in Kojima is constructed of a planetary gear with a rotary shaft of the planetary gear linked to the engine output shaft (1a), a ring gear with a rotary shaft of the ring gear connected to the rotary shaft (2a) of the electric motor (2), and a sun gear with a rotary shaft of the sun gear connected to the generator (3). Thus, the power distributing mechanism clearly has a function of distributing or transmitting a rotary force or power from at least one of the shafts of the engine and the electric motor to the generator. Such mechanism routinely utilizes clutches for starting the vehicle from a stopped position and for connection or disconnection of the rotary elements (planetary gear, ring gear, and sun gear) selectively. Accordingly, a clutch is deemed to be inherent to the power distributing mechanism in Kojima.

Kojima, however, fails to specifically disclose that the power distributing mechanism comprises a clutch for performing the connection or disconnection of the transmission of the power between the generator connected to the engine and to the motor.

For the reason outlined above, it is at least obvious to those with ordinary skill in the art that the power distributing mechanism (4) in Kojima comprises a clutch for performing the connection or disconnection of the transmission of the power between the generator (3) connected to the engine and to the electric motor (2).

Re claim 8, in the apparatus of Kojima, the control circuit allows the generator to generate electric power, and drives the vehicle by the motor, when the detected result from the temperature detector is below the first reference value according to the output from the first comparison circuit, and when the detected result from the remaining charge detector is above the

second reference value relating to the remaining charge according to the output from the second comparison circuit (see lines 1-33 of column 9).

Response to Arguments

5. Applicant's arguments with respect to the references applied in the previous Office Action have been fully considered but they are not persuasive.

In response to applicant's argument that Kojima fails to disclose or render obvious a clutch for their power distributing mechanism (pages 5-6 of Applicant's Amendment), the examiner respectfully disagrees.

Kojima has more than just a planetary gear for the power distributing mechanism. As indicated on line 62 of column 5 to line 6 of column 6, the power distributing mechanism (4) in Kojima is constructed of a planetary gear with a rotary shaft of the planetary gear linked to the engine output shaft (1a), a ring gear with a rotary shaft of the ring gear connected to the rotary shaft (2a) of the electric motor (2), and a sun gear with a rotary shaft of the sun gear connected to the generator (3). During the vehicle operation, Kojima selectively uses the power output from the engine (1) and the electric motor (2) to rotate a rotary shaft (2a). At the time of vehicle stop and when the accelerator aperture is small, the ECU (24) does not start up the engine and utilizes the electric power from the battery (6) to operate the electric motor (2) for turning the rotary shaft (lines 30-41 of column 7). On the other hand, when the vehicle is in a normal traveling state, the ECU operates the engine only to provide the driving force to the rotary shaft and to the generator (3) (line 65 of column 7 to line 5 of column 8). Thus, the power distributing

Art Unit: 3748

mechanism in Kojima clearly has a function of distributing or transmitting a rotary force or power from at least one of the shafts of the engine and the electric motor to the generator. Such mechanism routinely utilizes clutches for starting the vehicle from a stopped position and for connection or disconnection of the rotary elements (planetary gear, ring gear, and sun gear) selectively. Accordingly, a clutch is deemed to be inherent or at least obvious to the power distributing mechanism in Kojima.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Art Unit: 3748

Communication

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Tu Nguyen whose telephone number is (703) 308-2833 or (571) 272-4862 to be effective on November 24, 2004.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Thomas E. Denion, can be reached on (703) 308-2623 or (571) 272-4859 to be effective on November 24, 2004. The fax phone number for this group is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-1148.

Tu M. Nguyen

TMN

Tu M. Nguyen

October 18, 2004

Patent Examiner

Art Unit 3748